



LAPORAN HASIL PENELITIAN

“PEMBUATAN DAN KARAKTERISASI MEMBRAN
SUPERHIDROFOBİK BERBASIS POLİMER POLİSTIRENA (PS) /
POLYDIMETHYLSILOXANE (PDMS)”

APPENDIX

I. Perhitungan Nilai Porositas

Rumus % Porositas :

$$\% \text{ Porositas} = \frac{W_1 - W_0}{A \cdot L \cdot 0.998} \times 100$$

Keterangan :

W_1 : Berat akhir membrane setelah diimersi dengan aquadest (gr)

W_0 : Berat awal membrane (gr)

A : Luas permukaan membrane (cm^2)

L : Ketebalan membrane (cm)

- Membran Ps/PDMS : 20/5

Diketahui :

$$W_1 = 0.54 \text{ gr} \quad A = 12.748 \text{ cm}^2$$

$$W_0 = 0.51 \text{ gr} \quad L = 0.0216 \text{ cm}$$

$$\% \text{ Porositas} = \frac{0.54 - 0.51 \text{ gr}}{(12.748) \cdot (0.0216) \cdot (0.998)} \times 100 = 8.37 \%$$



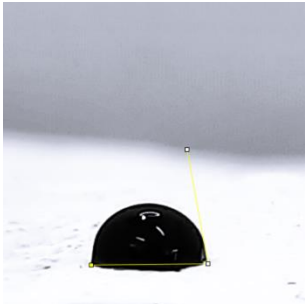
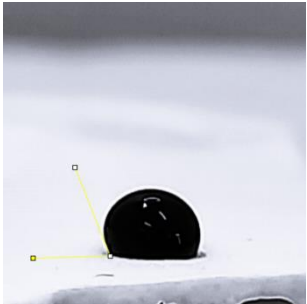

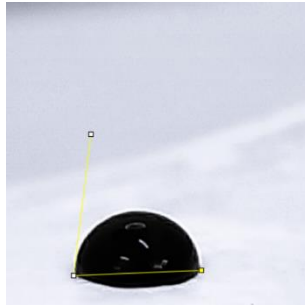

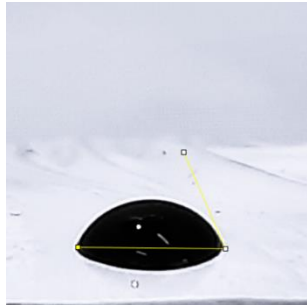
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LAMPIRAN

1. Hasil Pengujian Sudut Kontak :

A. Membran Ps dengan Pelapisan PDMS 5%

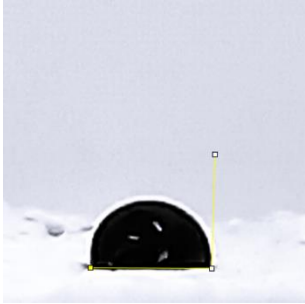
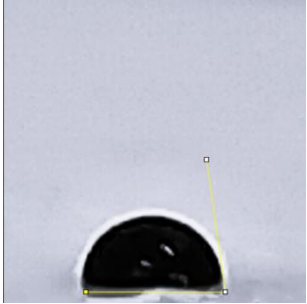
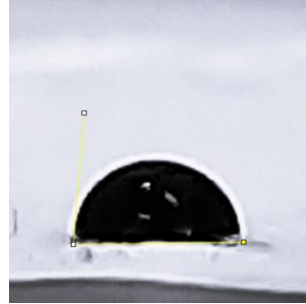
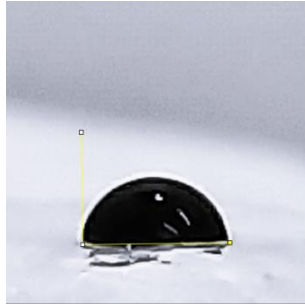
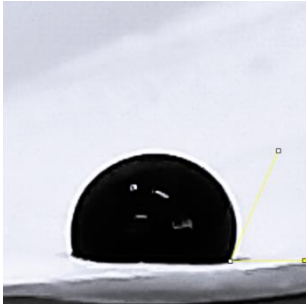
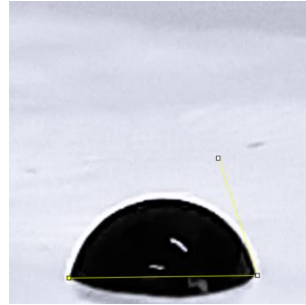
<p>Ps 18%</p>  <p>(80.22 °)</p>	<p>Ps 20%</p>  <p>(110.12 °)</p>	<p>Ps 22.5%</p>  <p>(83.48 °)</p>
<p>Ps 25%</p>  <p>(80.67 °)</p>	<p>Ps 27.5%</p>  <p>(82.67 °)</p>	<p>Ps 30%</p>  <p>(65.96 °)</p>



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B. Membran Ps dengan Pelapisan PDMS 7.5%

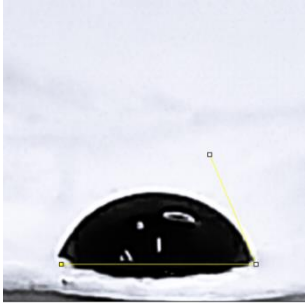
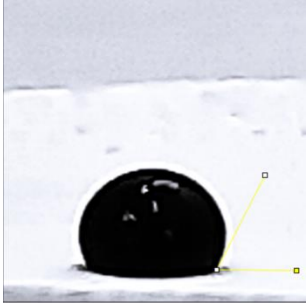
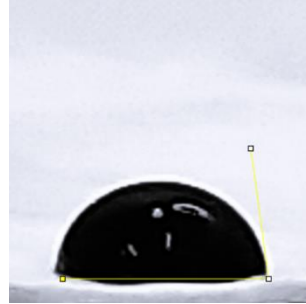
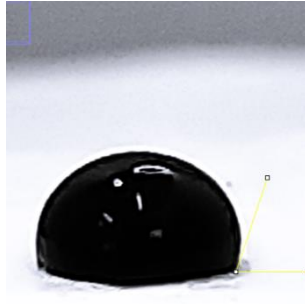
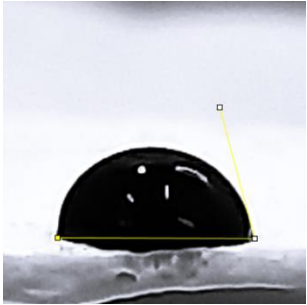
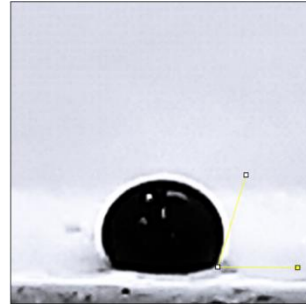
<p>Ps 18%</p>  <p>(91.22 °)</p>	<p>Ps 20%</p>  <p>(81.91 °)</p>	<p>Ps 22.5%</p>  <p>(84.56°)</p>
<p>Ps 25%</p>  <p>(89.90 °)</p>	<p>Ps 27.5%</p>  <p>(114.09 °)</p>	<p>Ps 30%</p>  <p>(72.75 °)</p>



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C. Membran Ps dengan Pelapisan PDMS 10%

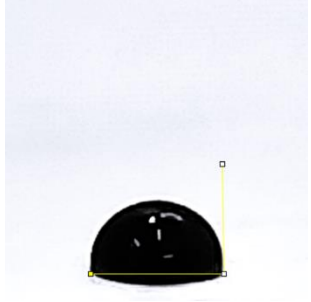
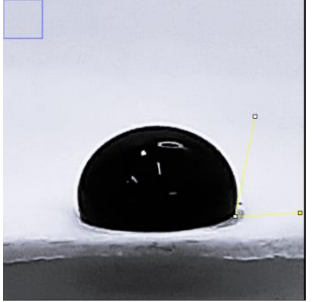
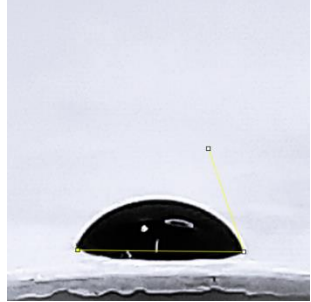

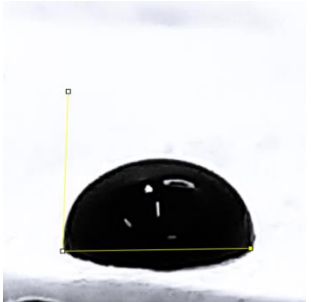
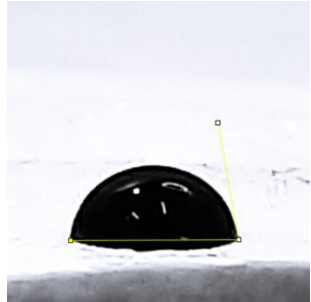
<p>Ps 18%</p>  <p>(67.09 °)</p>	<p>Ps 20%</p>  <p>(116.17 °)</p>	<p>Ps 22.5%</p>  <p>(82.17°)</p>
<p>Ps 25%</p>  <p>(108.43 °)</p>	<p>Ps 27.5%</p>  <p>(74.81°)</p>	<p>Ps 30%</p>  <p>(106.6 °)</p>



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D. Membran Ps dengan Pelapisan PDMS 12.5%

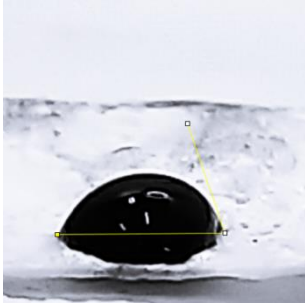
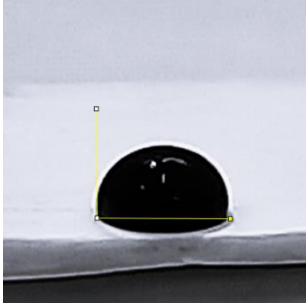
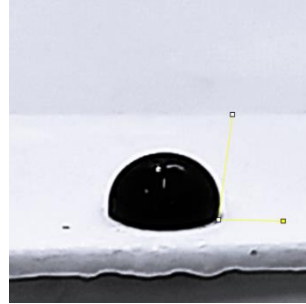
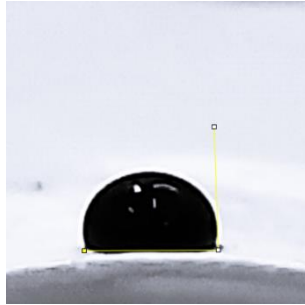
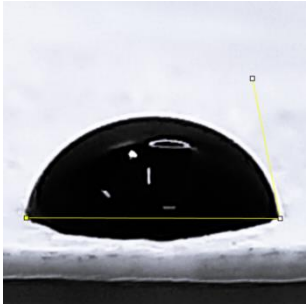
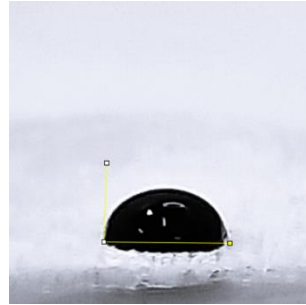
<p>Ps 18%</p>  <p>(89.18°)</p>	<p>Ps 20%</p>  <p>(104.52 °)</p>	<p>Ps 22.5%</p>  <p>(70.38 °)</p>
<p>Ps 25%</p>  <p>(104.71 °)</p>	<p>Ps 27.5%</p>  <p>(87.14°)</p>	<p>Ps 30%</p>  <p>(80.10 °)</p>



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E. Membran Ps dengan Pelapisan PDMS 15%

<p>Ps 18%</p>  <p>(71.60°)</p>	<p>Ps 20%</p>  <p>(90.66 °)</p>	<p>Ps 22.5%</p>  <p>(96.31 °)</p>
<p>Ps 25%</p>  <p>(88.38 °)</p>	<p>Ps 27.5%</p>  <p>(78.58°)</p>	<p>Ps 30%</p>  <p>(88.59 °)</p>